

**Figure 1: Self Addressing Microlocations
(Microlithographic Fabrication)**

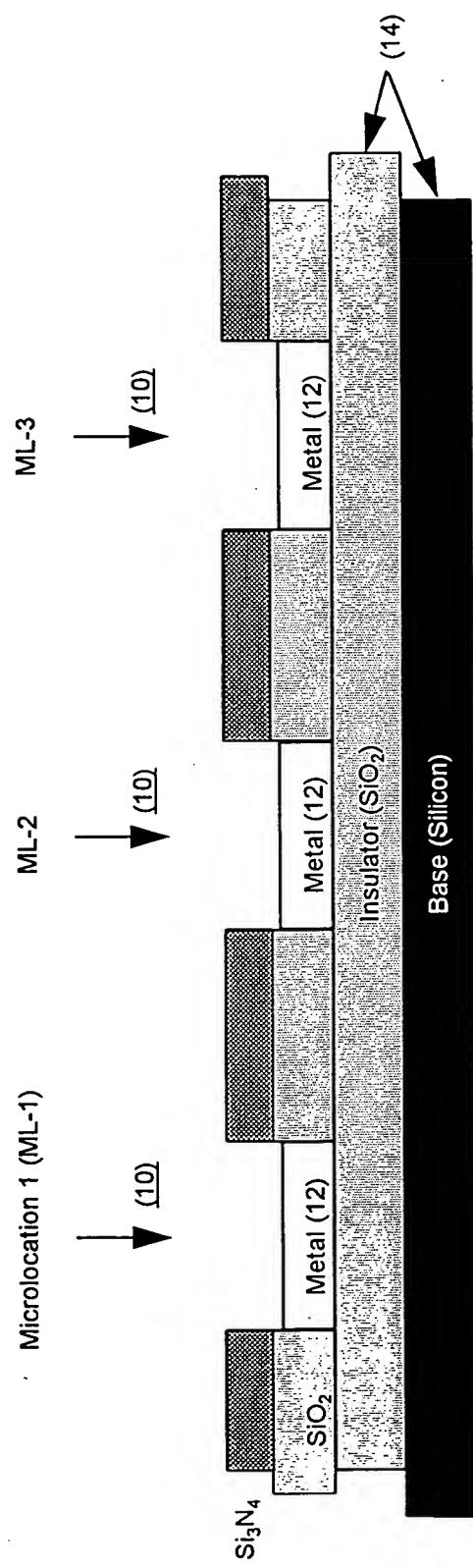


Figure 2: Microlocation Design Features

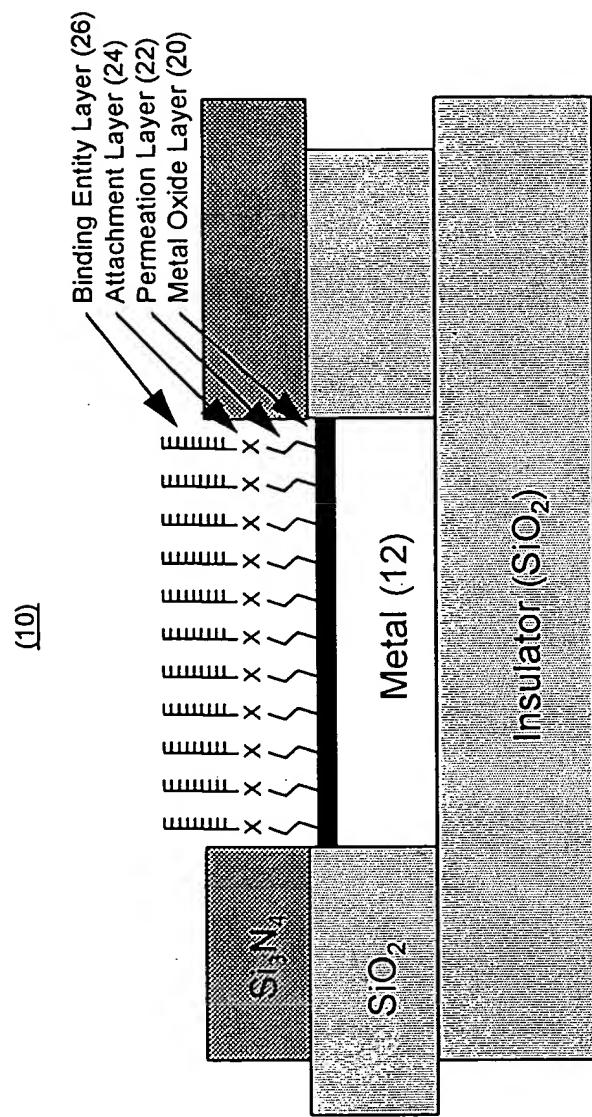


Figure 3: Self-Addressable 64 Microlocation Chip

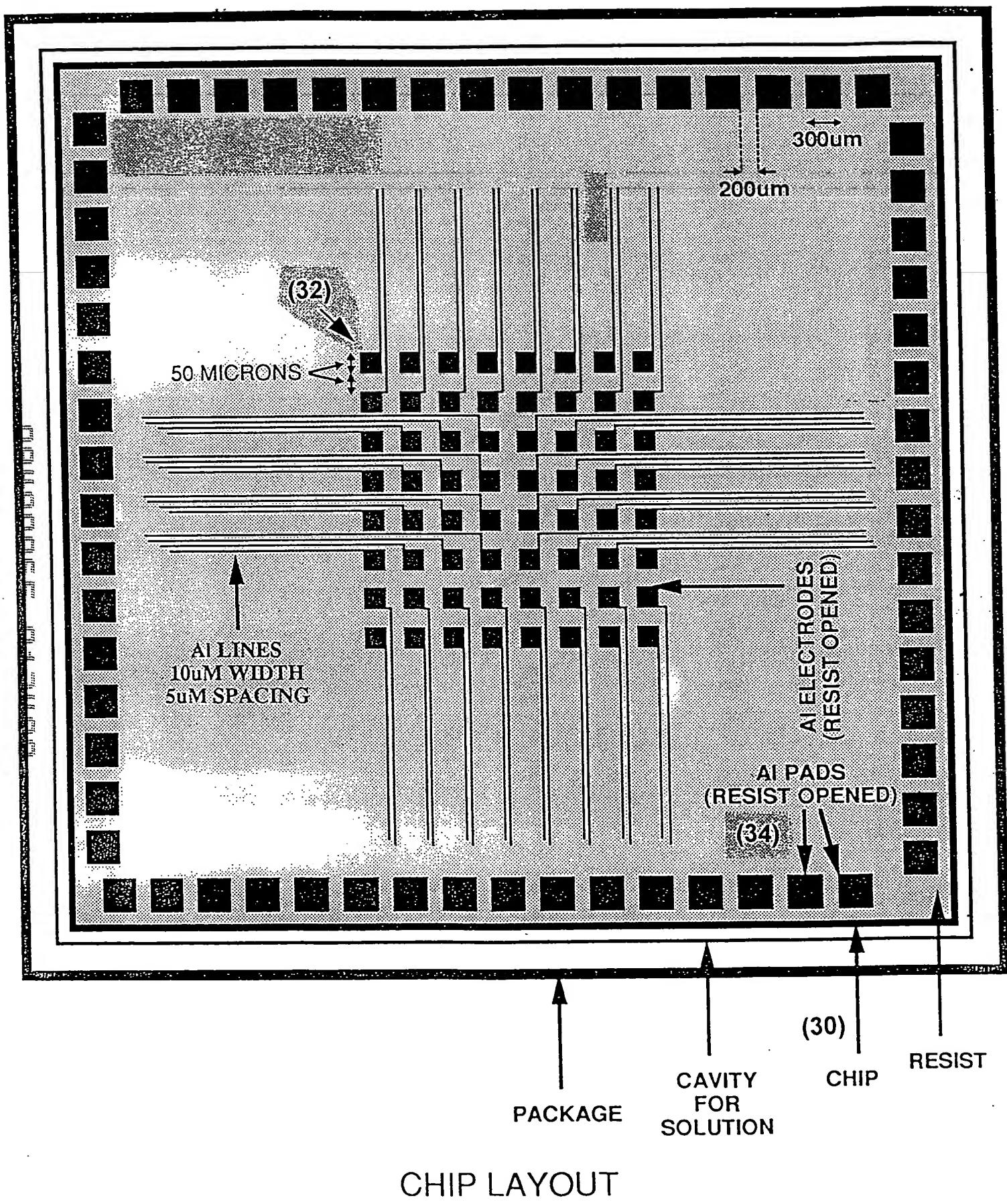


Figure 4: DNA Attachment Chemistry

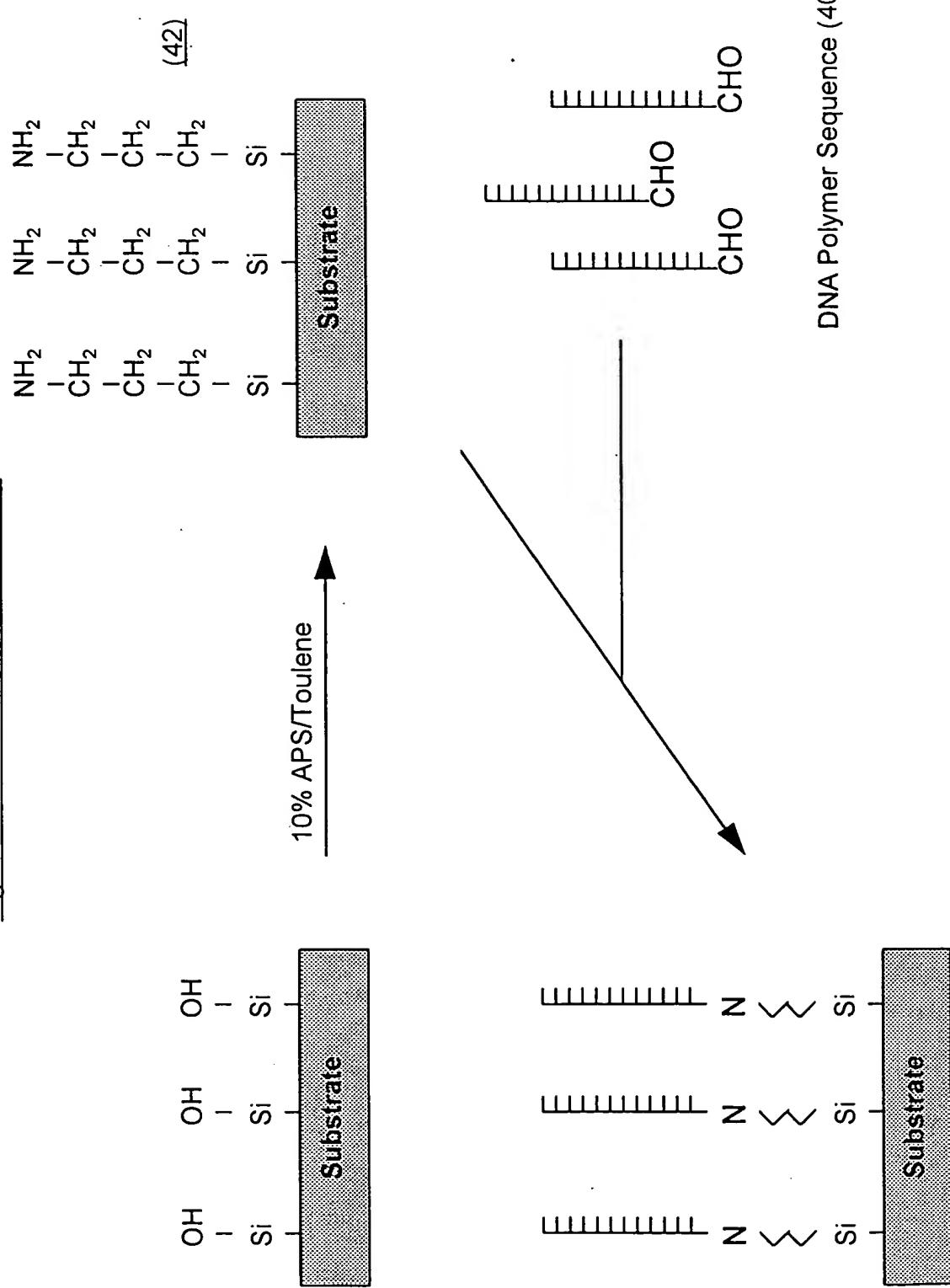


Figure 5: Micro-Machined Device (Exploded View)

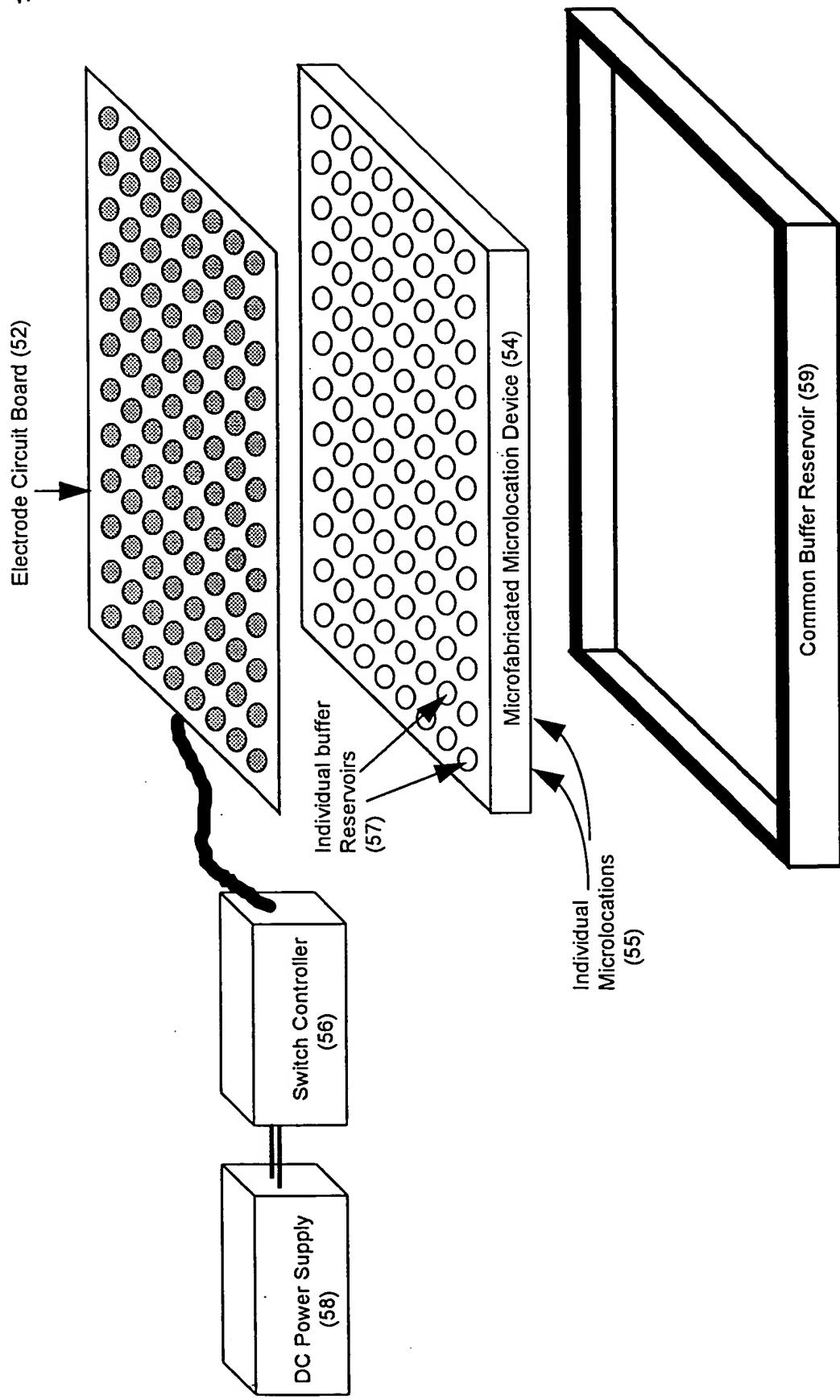


Figure 6: Micro-Machined Device (Cross-Section)

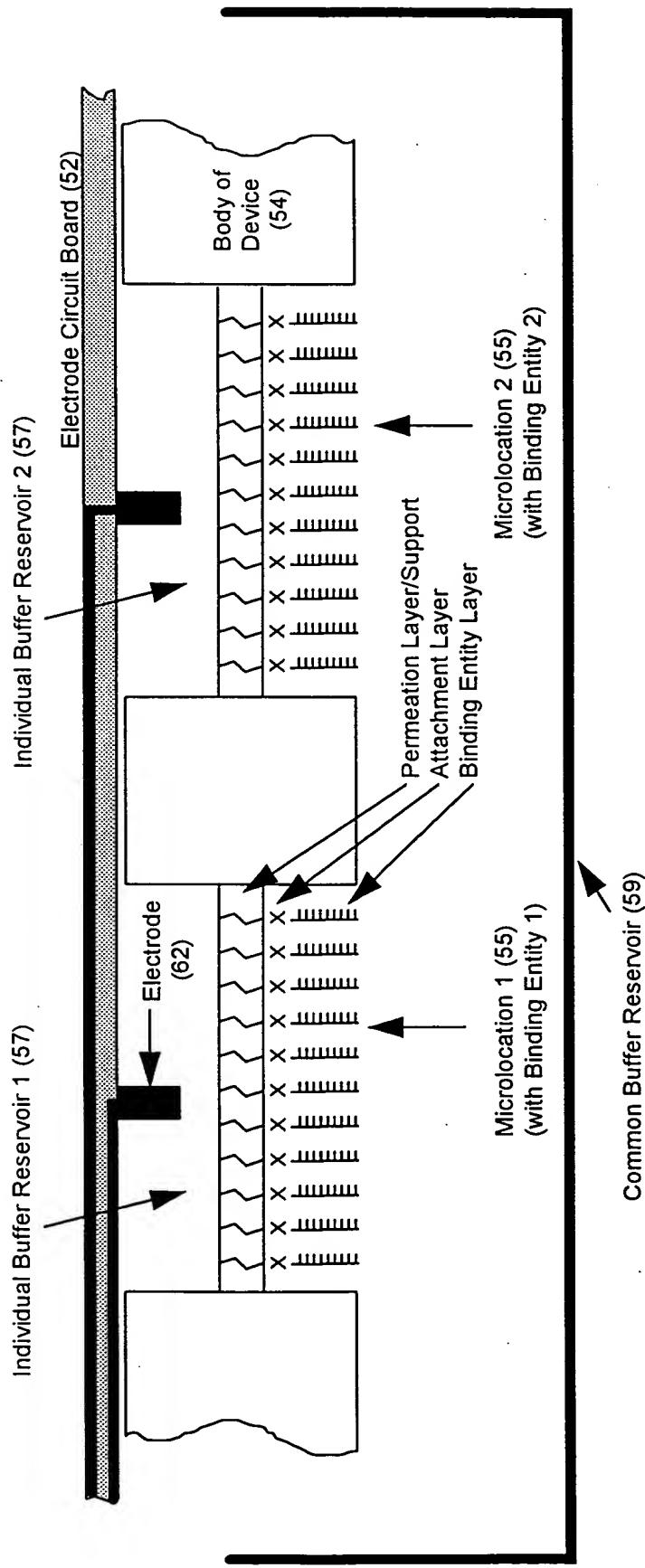


Figure 7: Electronically Controlled Concentration Effect

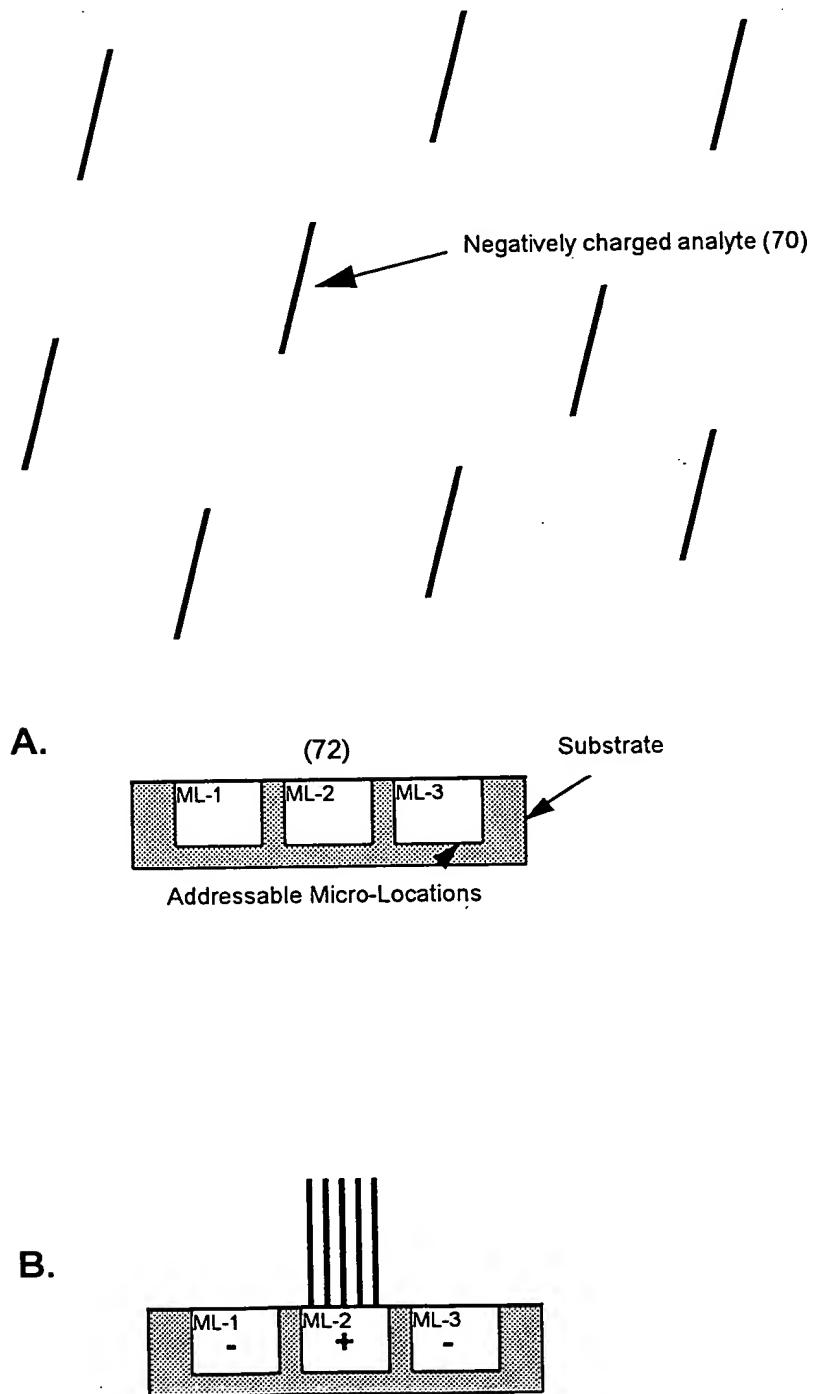
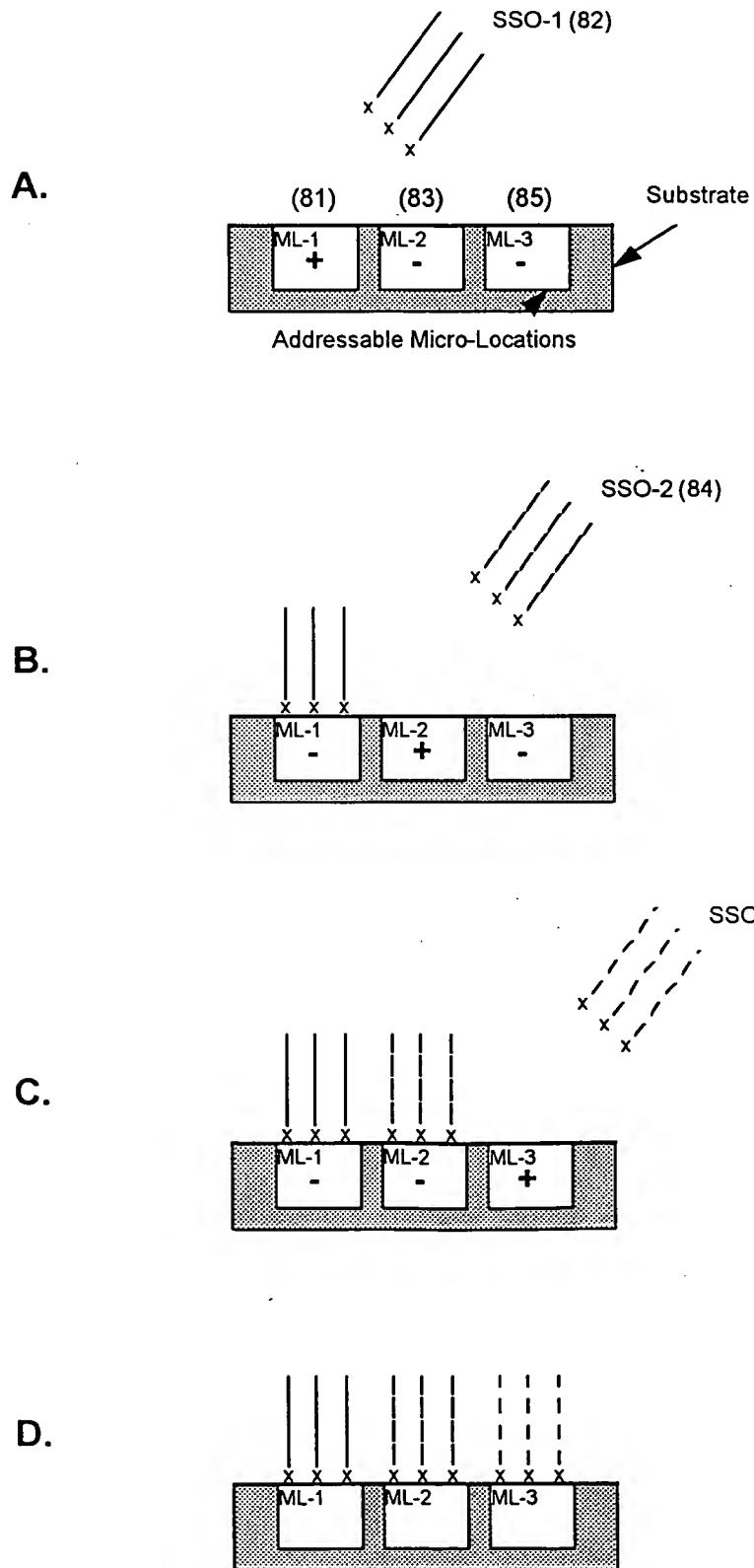


Figure 8: Electronic Addressing and Self-Directed Assembly of Device.



.. Figure 9: Electronically Controlled Hybridization Process

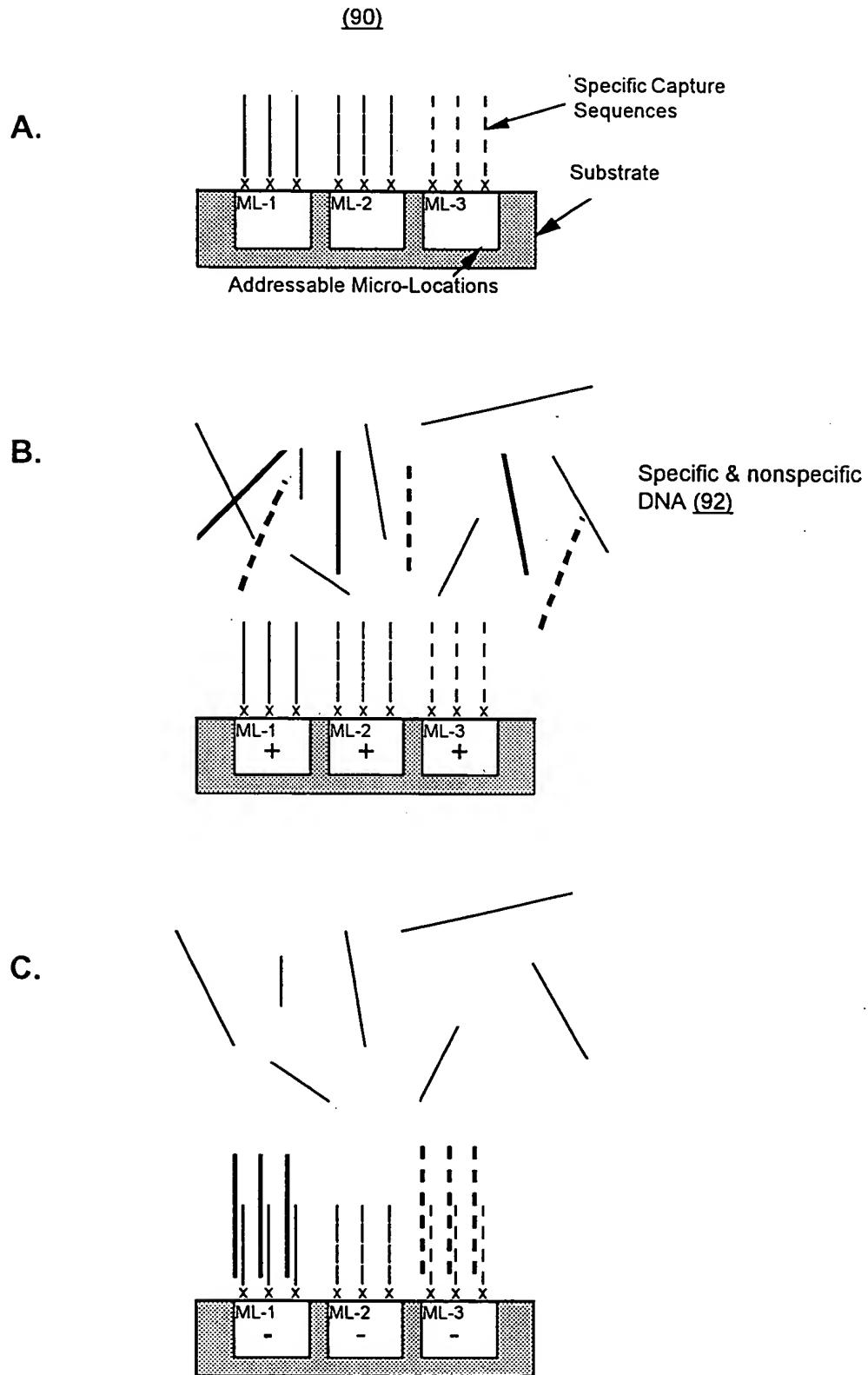


Figure 10: Electronically Directed Serial Hybridization Process

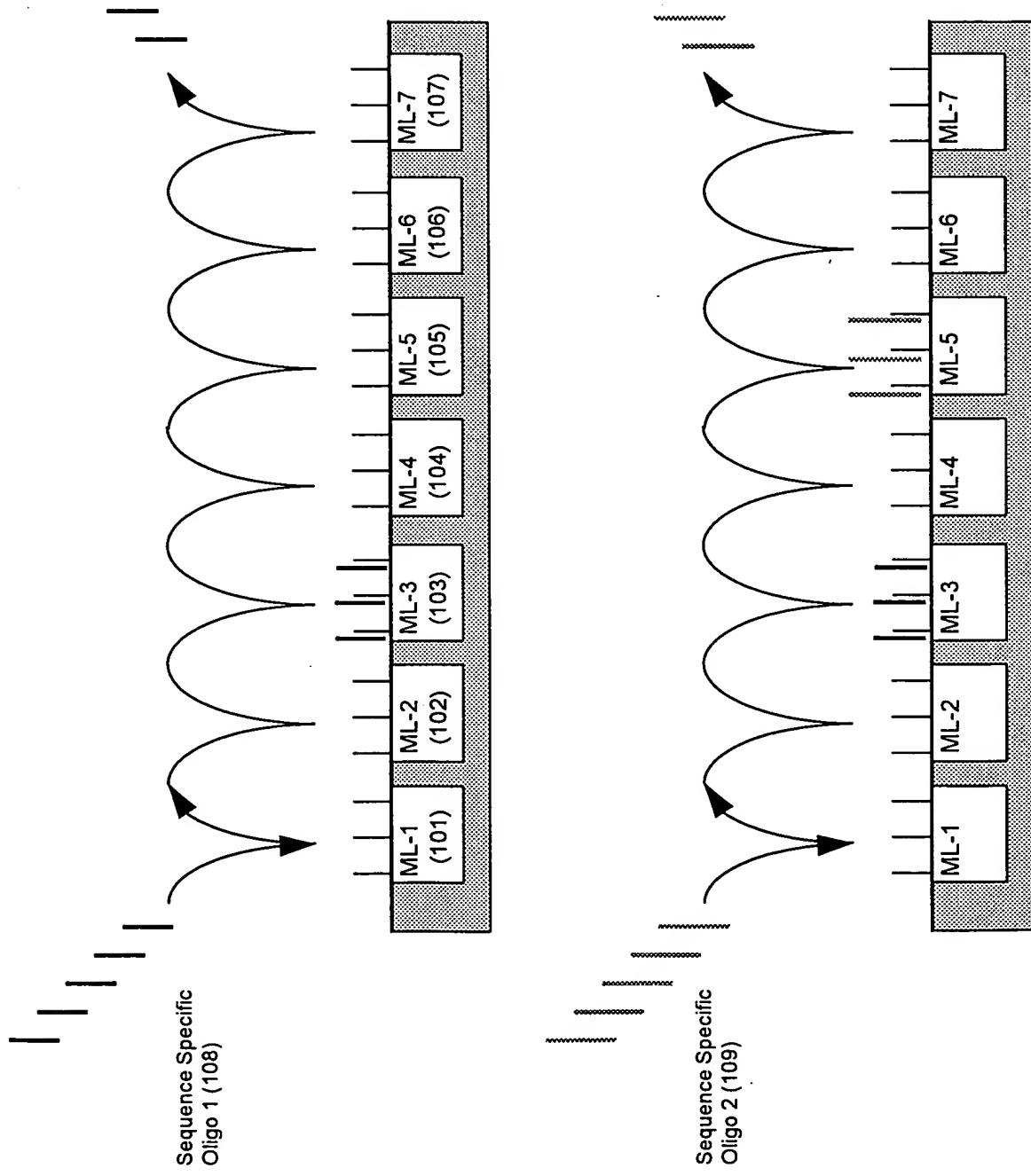


Figure 11: Electronic Stringency Control (ESC) of Hybridization Process

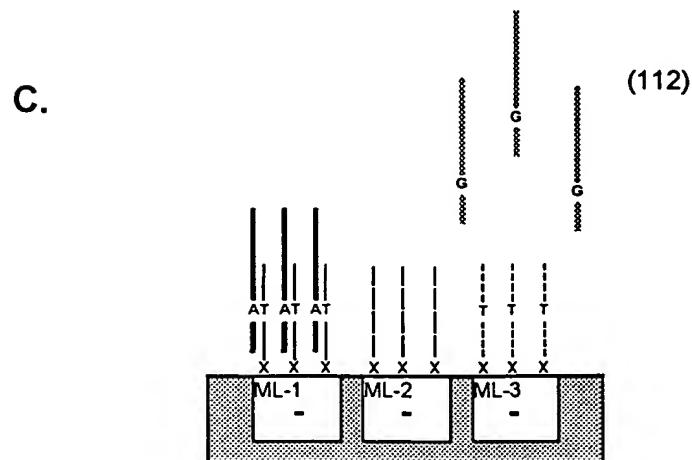
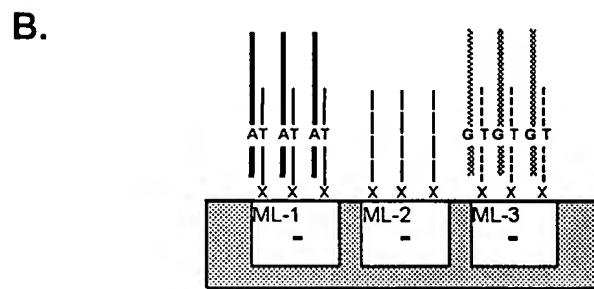
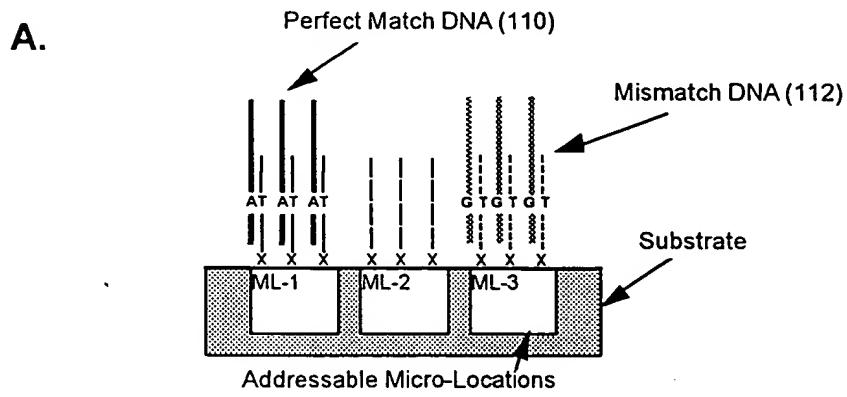


Figure 12: Electronically Controlled Fluorescent Dye Detection Process

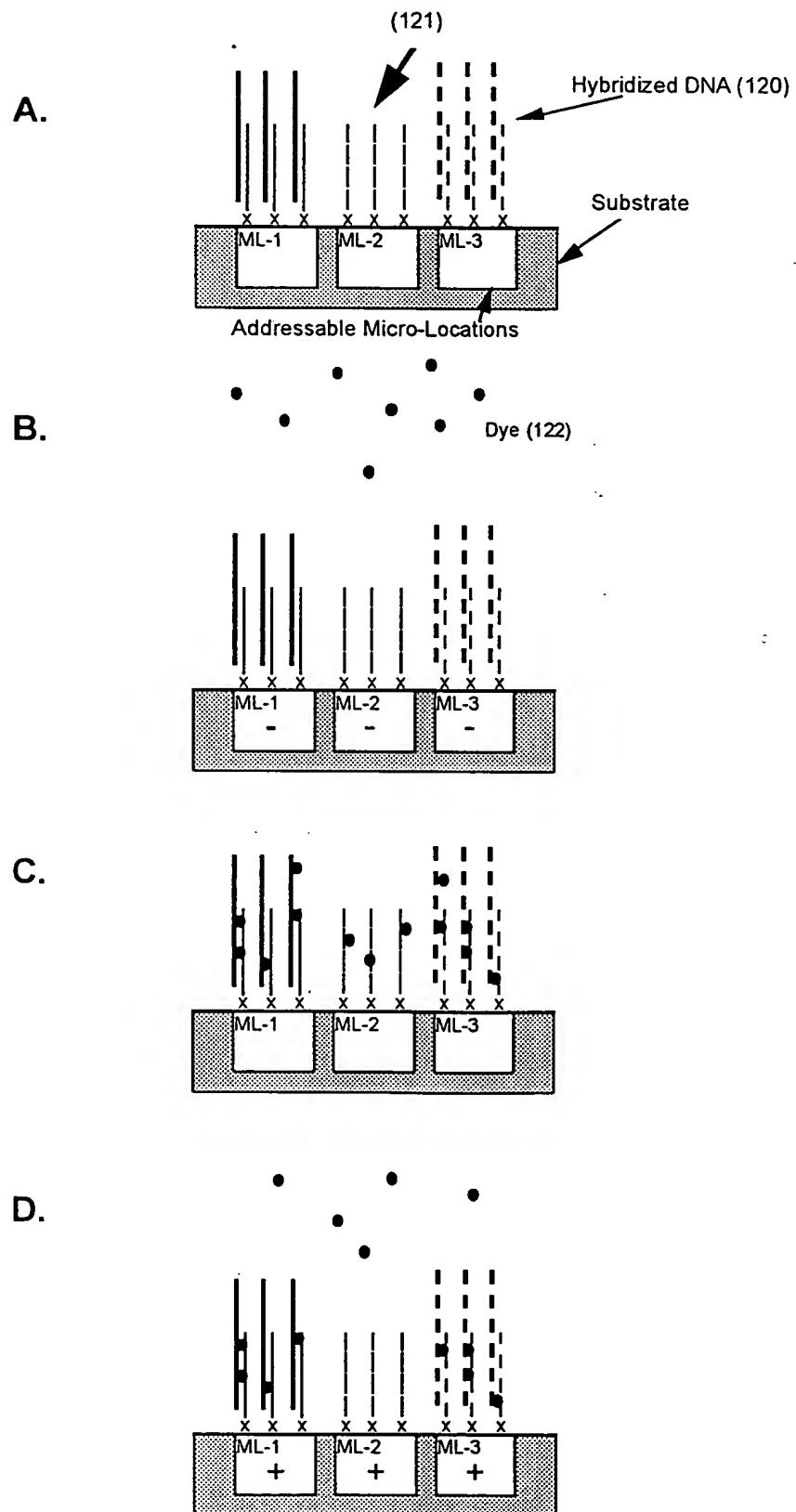


Figure 13: Electronically Controlled Template Replication

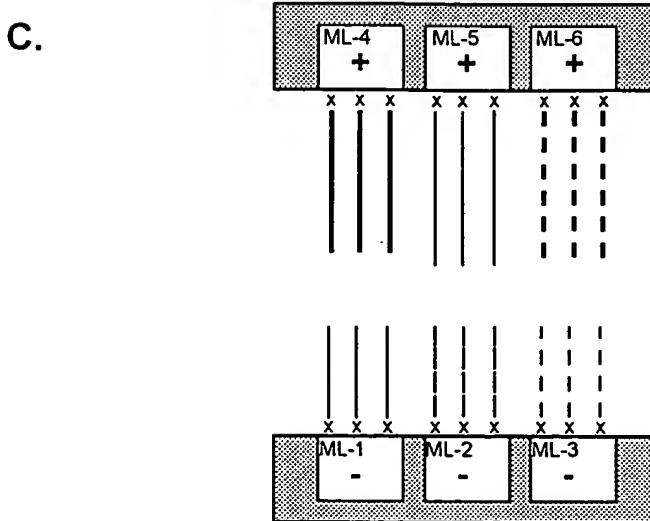
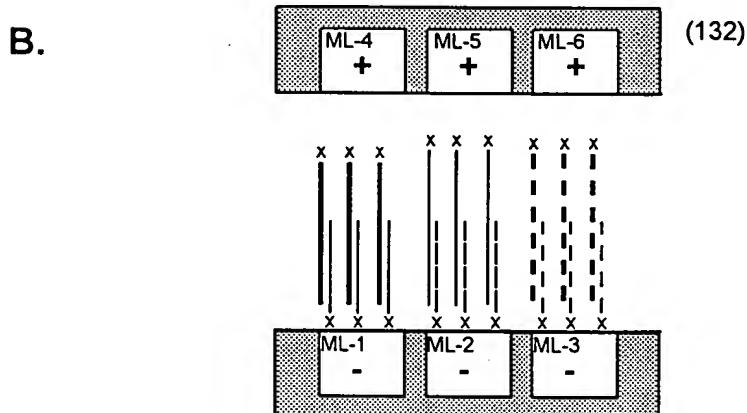
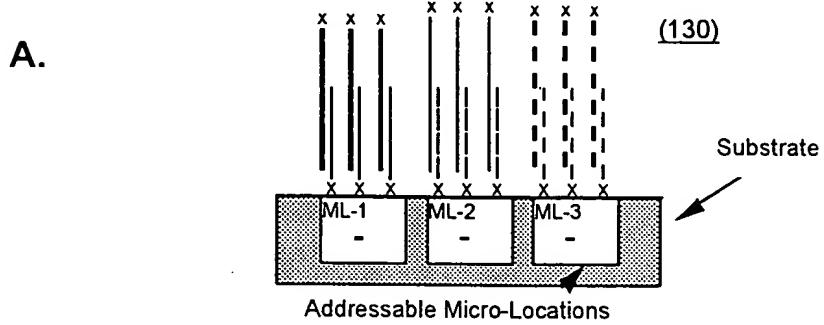


Figure 14: Electronically Directed Combinatorial Synthesis.

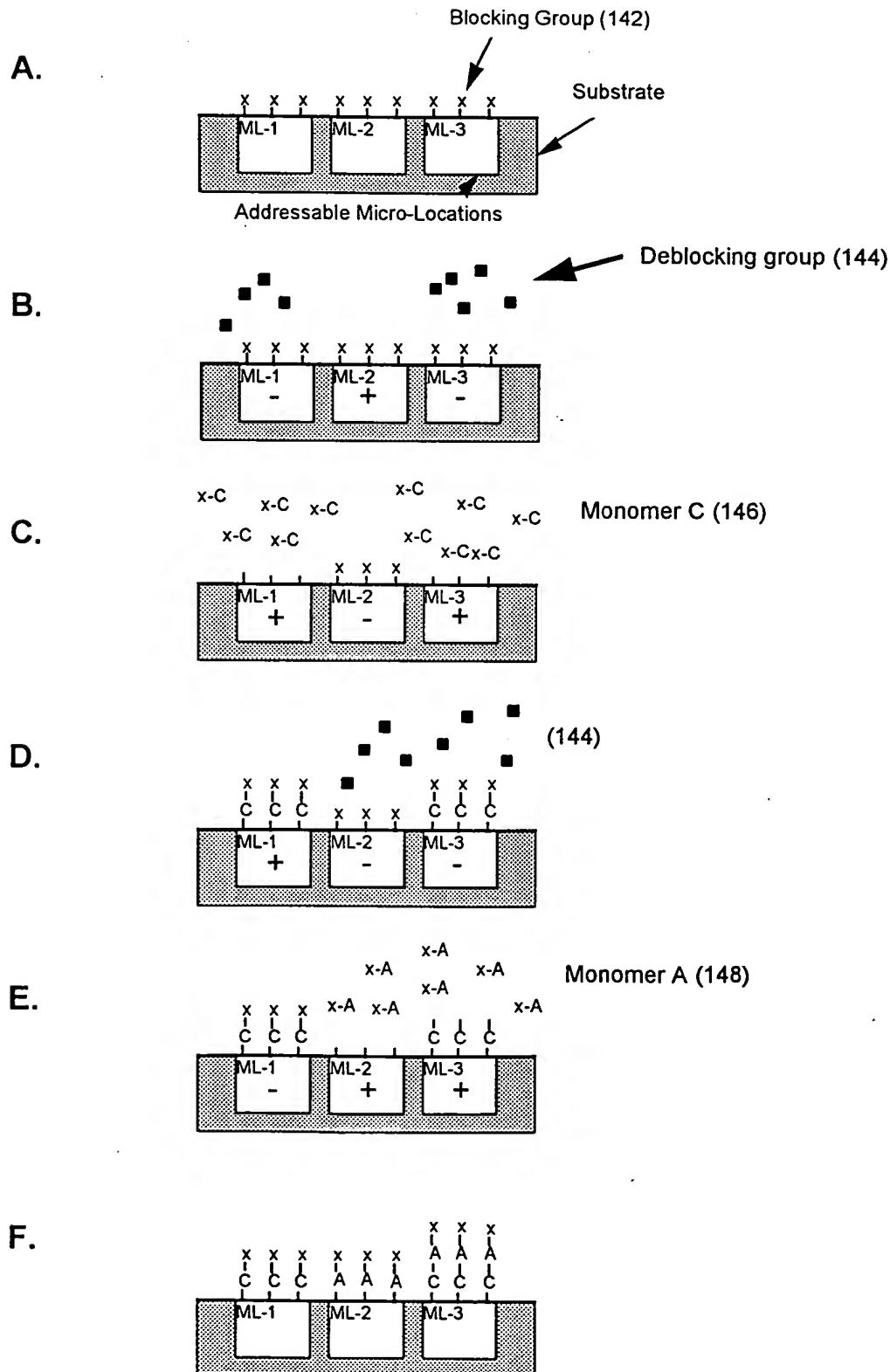


Figure 15.

Relative Sensitivity for Mismatch Discrimination

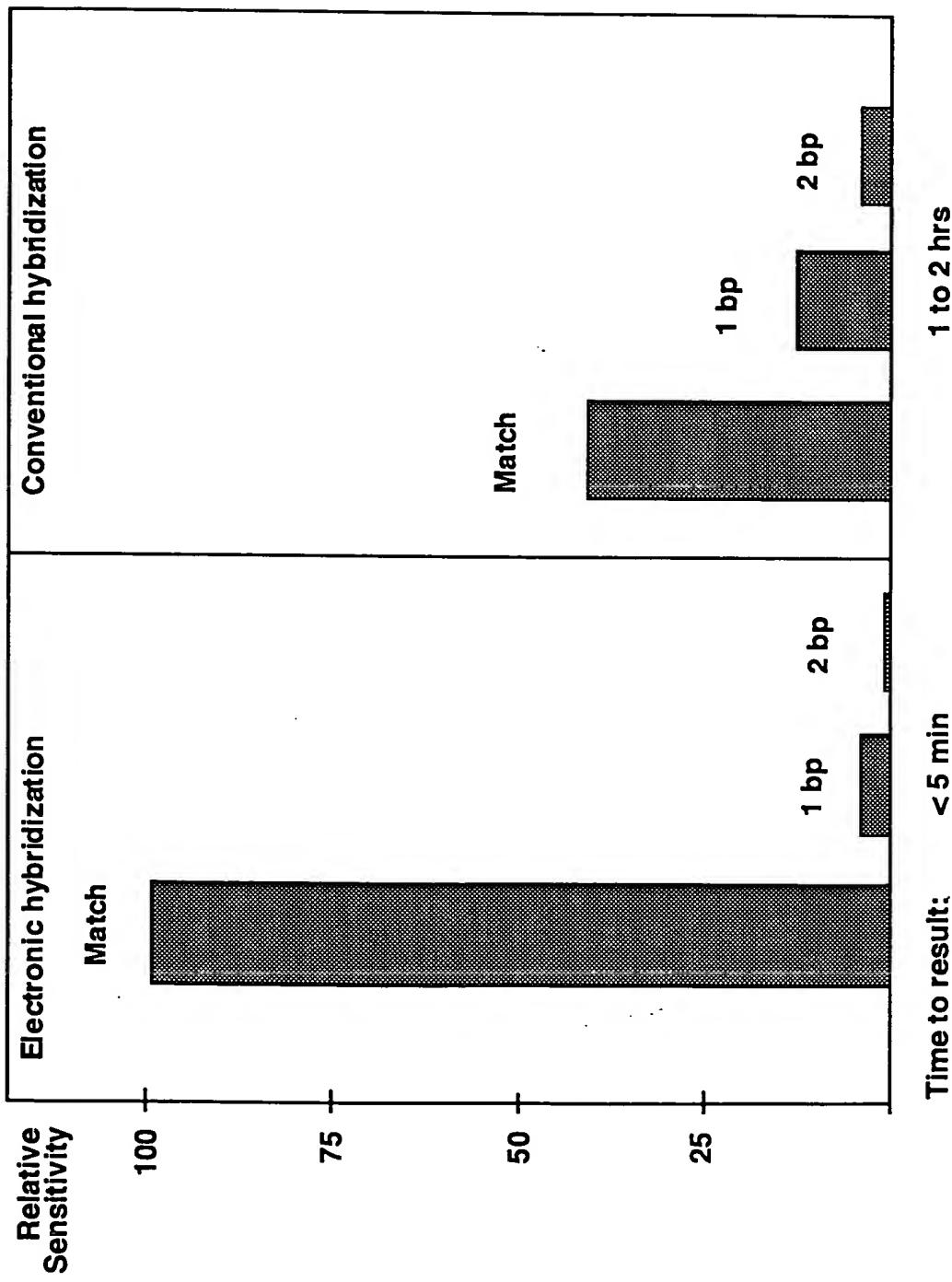


Figure 16
Electronic Restriction Cleavage

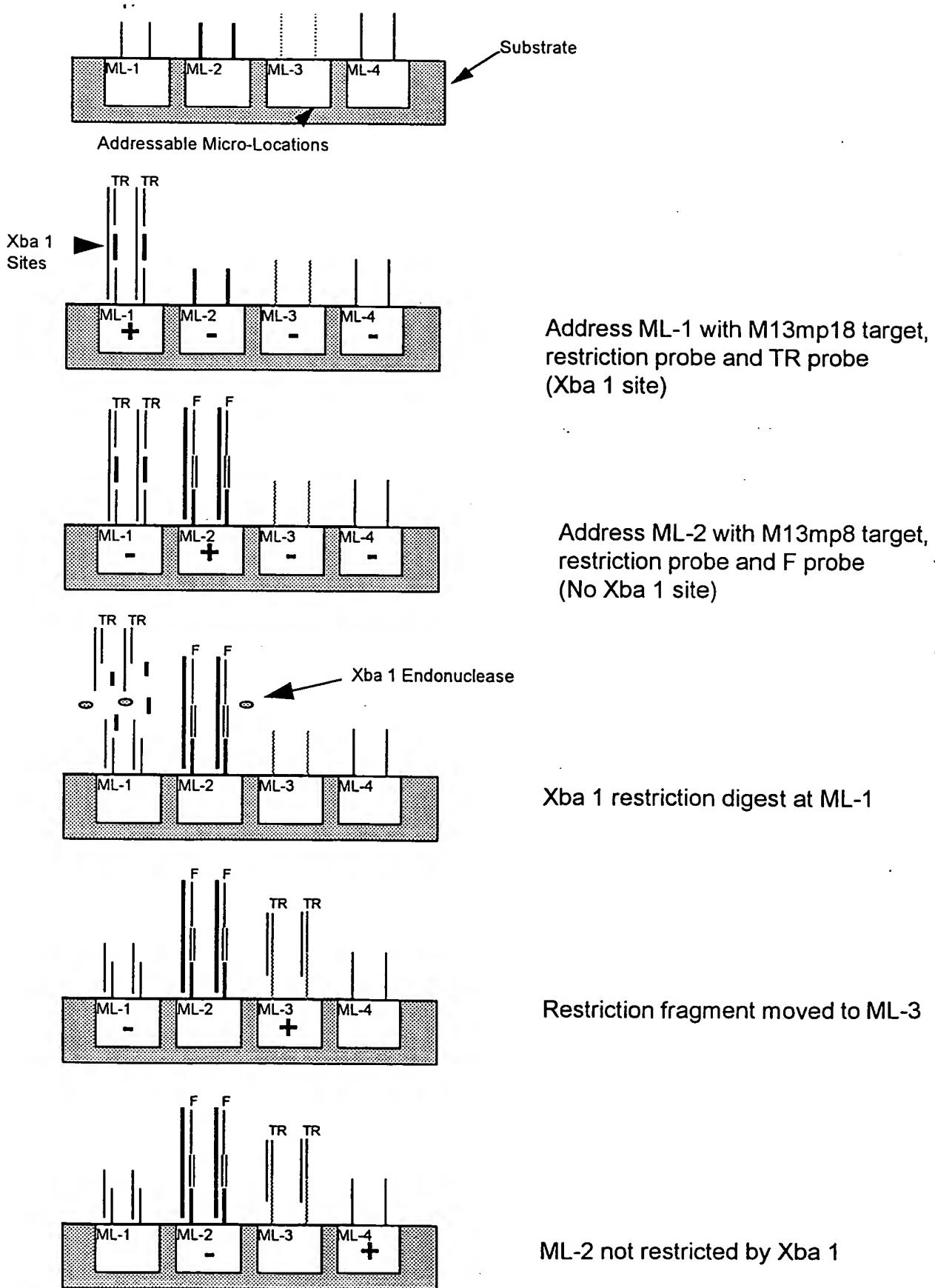


Figure 17

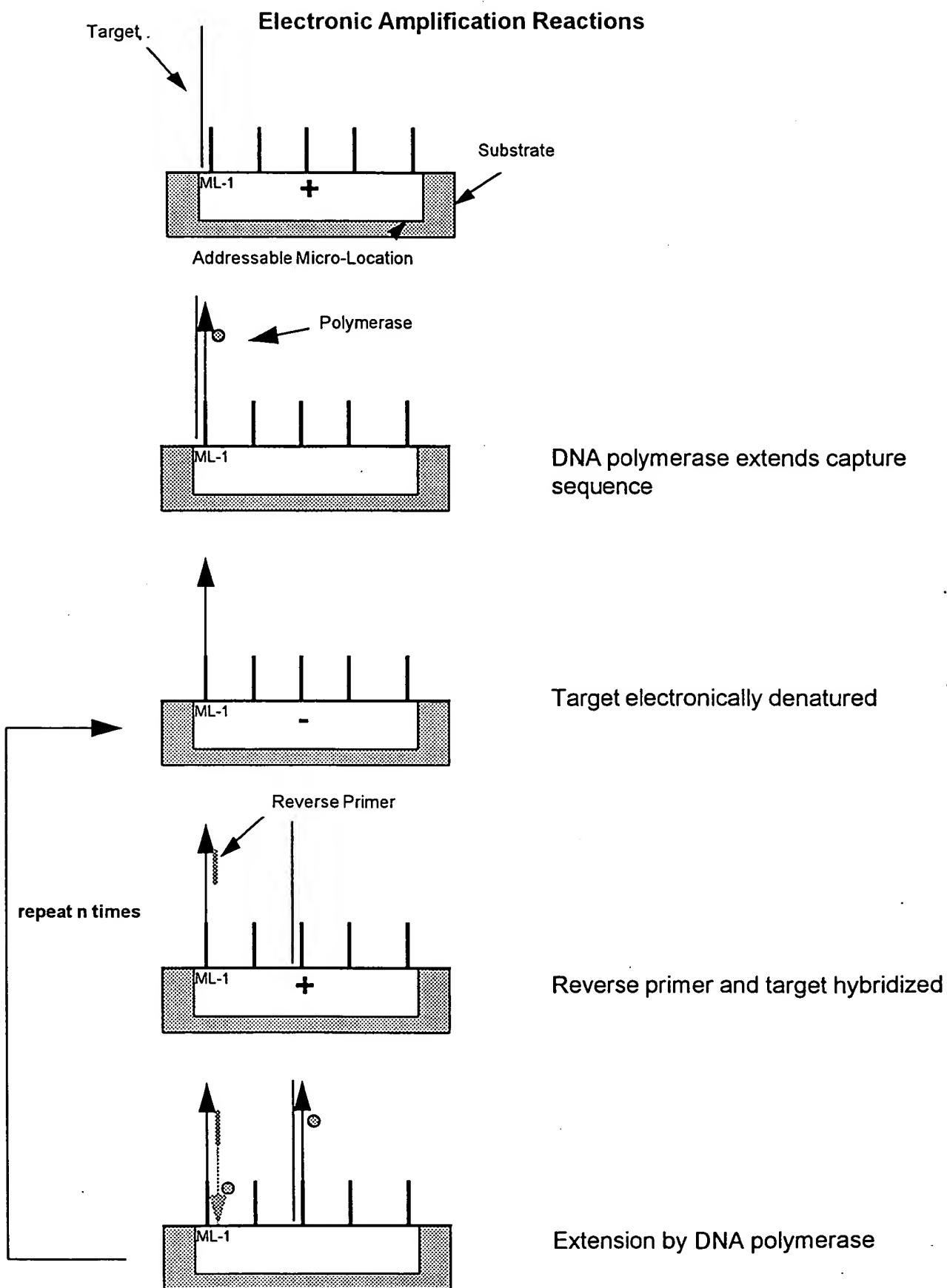


Figure 18
Complete APEX System with Sample Preparation

